

## IN THE INTERNATIONAL BUREAU OF WIPO

International Appl. No.: PCT/US2004/041793  
Filed: 10 December 2004  
Applicant: APRILIS, INC.  
Title: METHODS AND APPARATUS FOR THE FIXING OF  
HOLOGRAPHIC MEDIA IN HOLOGRAPHIC DATA  
STORAGE SYSTEMS  
Attorney Docket: APR-004PCT  
AMENDMENT UNDER ARTICLE 19  
[Sent via facsimile to (41-22) 740.14.35]

International Bureau of WIPO  
34, chemin des Colombettes  
1211 Geneva 20, Switzerland

Dear Sir:

Responsive to the International Search Report of 11 July 2005 for the above-identified application, please amend Claims 1, 11, 18 and 26 and add new Claims 46-49 as shown on additional substitute sheets for pages 18-23 and new sheet for page 24 of the application.

Statement

In the Written Opinion dated 11 July 2005, Claim 11 was objected under PCT Rule 66.2(a)(iii). Claim 11 has been amended to overcome this objection.

Claims 1, 4, 12, 14, 18, 21, 28, 31, 35-37, and 41-42 were held to lack novelty under PCT Article 33(2) as being anticipated by Smith et al. (U.S. Patent No. 5,387,989), and Claims 2-3, 17, 19-20, 34 and 45 were held to lack inventive step under PCT Article 33(3) as being obvious over Smith et al. Smith et al. relates to holograms for stoplights for vehicles (see Abstract, lines 1-2; column 1, lines 7-8; and column 2, lines 56-68). As such, the hologram of Smith et al. neither records computer readable data, nor would be usable in a holographic data storage system, apparatus, or method to which the claimed invention is directed. Stop lights are not comparable to holographic media storing data or other information readable by computers. Accordingly, the claimed invention is clearly novel and has inventive step over Smith et al.

Claims 5-11, 13, 15-16, 22-27, 29-30, 32-33, 38-40, and 43-44 were held to lack inventive step under PCT Article 33(3) as being obvious over Smith et al. in view of Haskal (U.S. Patent No. 6,023,352). For reasons argued above, Smith neither describes, nor suggests, the claimed invention. Haskal describes holograms in photorefractive crystals (see column 4, lines 38-48; and column 8, lines 31-33). In contrast, base Claims 1 and 18 describe holographic media as being of photopolymer material, rather than material of

photorefractive crystals. Thus, dependent Claims 5-11, 13, 15-16, 22-27, 29-30, 32-33, 38-40, and 43-44 distinguish over Smith et al. and Haskal, either alone or in combination. Moreover, Haskal relates to holograms for optical storage, while Smith et al. relates to stop lights for vehicles, which are two distinct unrelated applications teaching away from their combination. Patentability of the claims of the present application under PCT Articles (33)(2) and 33(3) is thus present.

Claims 46-49 have been added to the application and are also patentable over Smith et al. and Haskal.

Date: 9 September 2005

Respectfully submitted,




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Enc.

I certify that this Amendment under Article 19 is being facsimile transmitted to the International Bureau of WIPO, 34, chemin des Colombettes, 1211 Geneva 20, Switzerland at phone number (41-22) 740.14.35 on 9 September 2005.



Kenneth J. LuKacher

PCT/US04/41793

## CLASSIFICATION OF SUBJECT MATTER

IPC(7) : G03H 1/10  
 US CL : 359/10

According to International Patent Classification (IPC) or to both national classification and IPC

## FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 359/10,1,11,27,35

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
 AST, INSPEC

## DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	US 5,387,989 A (SMITH et al) 7 February 1995 (07.02.1995), See entire document, particularly Figures 7-9; col. 8, line 48-col. 9, line 20.	1-4,12,14,17-21,28,31,34-37,41-42,45 ----- 5-11,13,15-16, 22-27,29-30,32-33,38-40,43-44
Y	US 6,2023,352 A (HASKAL) 8 February 2000 (08.02.2000), See entire document, particularly Abstract, Figure 1.	5-11,13,15-16, 22-27,29-30,32-33,38-40,43-44

☐ Further documents are listed in the continuation of Box C.


See patent family annex.

## Special categories of cited documents:

- “ ” document defining the general state of the art which is not considered to be of particular relevance
- “ ” earlier application or patent published on or after the international filing date
- “ ” document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
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- “ ” document published prior to the international filing date but later than the priority date claimed

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later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

“X”

document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

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document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

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